

FEBRUARY 17, 1997 • VOLUME III, ISSUE II

COMPUTERWORLD

• *Leadership Series* •

From the Editors of Computerworld



By Jerry N. Luftman

Align in the sand

How can you align
technology and business
despite ever-shifting
strategies and endlessly
changing technologies?
Begin by examining where
you are, where you are
going and how you
prioritize IT projects and
investments.

Bill Clinton and Al Gore have plenty to worry about: the federal deficit, foreign crises, welfare reform. Yet another issue is also regularly discussed in the Oval Office: IT alignment. Bruce W. McConnell, chief of the Office of Management and Budget's Information Policy and Technology Branch, annually meets with the president and vice president on how to ensure that the federal government is investing appropriately in IT.

Alignment is an issue that seems to always grow in importance. Decades have passed. Billions of dollars have been invested. Still, alignment — applying information technology in an appropriate and timely way, in harmony with business strategy, goals and needs — remains the key concern of business executives. Frustratingly, organizations seem to find it difficult or impossible to harness the power of IT for their own long-term benefit, even though there is worldwide evidence that IT has the power to transform whole industries and markets.

How can companies achieve alignment? We know the enablers and inhibitors that help and hinder alignment. IS executives experience them daily. What we are finding so hard is strengthening the enablers and minimizing the inhibitors in the midst of constant change. The endless, quicksilver shifting of business strategies and technology make aligning them as difficult as surveying sand dunes in the Sahara.

There is no silver bullet for alignment. However, practitioners and researchers have found ways to look at alignment and turn these insights into action items.

IBM's Advanced Business Institute in Palisades, N.Y., has been studying alignment for years. Since 1993, three researchers — Thomas Brier, a consulting instructor at the institute, Raymond Papp, an associate professor at Central Connecticut State University in New Britain, Conn., and myself — have assessed over 500 companies on strategic alignment. Both IT and non-IT executives were asked to identify and rank the top enablers and inhibitors of alignment.

The results provide a surprise: Alignment is not about vision statements (see chart below). It is not even about the goals that IS and non-IS executives are striving to attain. (The respondents did not consider clearly defined goals to be much of an enabler, while the lack of a goal did not score high as an inhibitor.)

Instead, alignment is about process. It's about what management *does* to achieve its IT goals.

According to the respondents, support from top non-IS executives and strong leadership from IS executives are the most important enablers. Non-IS executives are well aware of the importance of executive support for IT. In fact, they rated it higher than IS executives.

Strong IS leadership, judging by the survey results, means helping to develop the business strategy and selecting IT priorities. IS leaders must focus on recognizing business problems and proposing IT solutions. They must also identify specific opportunities and discuss them with the management team in terms they can understand. This is no different from what is

being asked of all functional managers. Marketing, manufacturing and financial executives are continuously asked to recognize problems and opportunities and propose solutions using their respective expertise. Why should IS be any different?

Executives recognize that it is easier to keep aligned when the appropriate cross-functional executive team (including IS) is involved in creating strategy. This participation must be earned day in and day out. That requires continuous relationship building by effectively communicating, listening, negotiating and marketing IT in terms that the business can appreciate.

And the inhibitors? Some of them are just the inverse of the enablers.

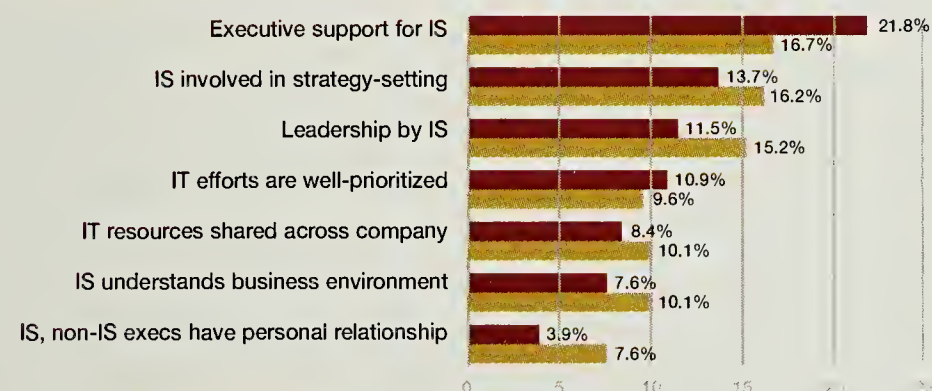
Poor prioritization of IT efforts and the lack of relationship between IS and non-IS executives were the top two factors preventing alignment.

IT executives, who believe that they are left hung out to dry without support, overwhelmingly rated "no close relationship" as the No. 1 inhibitor.

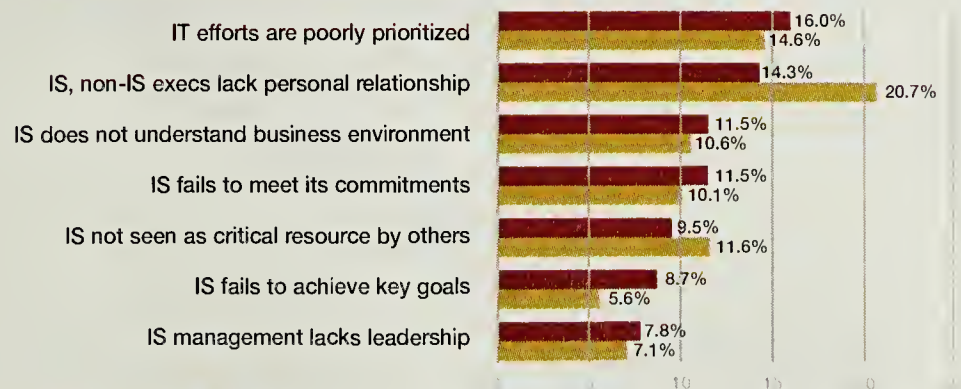
Non-IS executives, who complain that IS is off on tangential activities, put poor prioritization first. The solution to both problems is getting the business side to participate in IS decisions and projects. Non-IS executives need to lead in the justification and prioritization process, but they must also learn how to better manage IT investments.

Although the enablers and inhibitors to alignment have not changed since we began our study in 1992, one well-known model shows why alignment is a shifting target. It is the Strategic Alignment Model developed by Boston University professors John C. Henderson and N. Venkatraman (see footnote on page 11).

Alignment's Leading Enablers...



...and Inhibitors



Non-IT **IT**

Source: Survey of over 500 companies conducted between 1992-1996 by Luftman, Brier and Papp. Figures represent percentage of respondents who included this factor as one of the top three alignment enablers or inhibitors.

Enablers and Inhibitors

*Will you need to issue new
stock to afford them?*

JUST HOW WORRIED ARE YOU ABOUT CHOOSING THE RIGHT BUSINESS PC?

Picking a PC for your company raises a lot
of questions. Questions that we can answer.
To see why HP PCs make good business
sense, call us at 800-322-HPPC, Ext. 1880.*
Or visit <http://www.hp.com/go/vectra>.



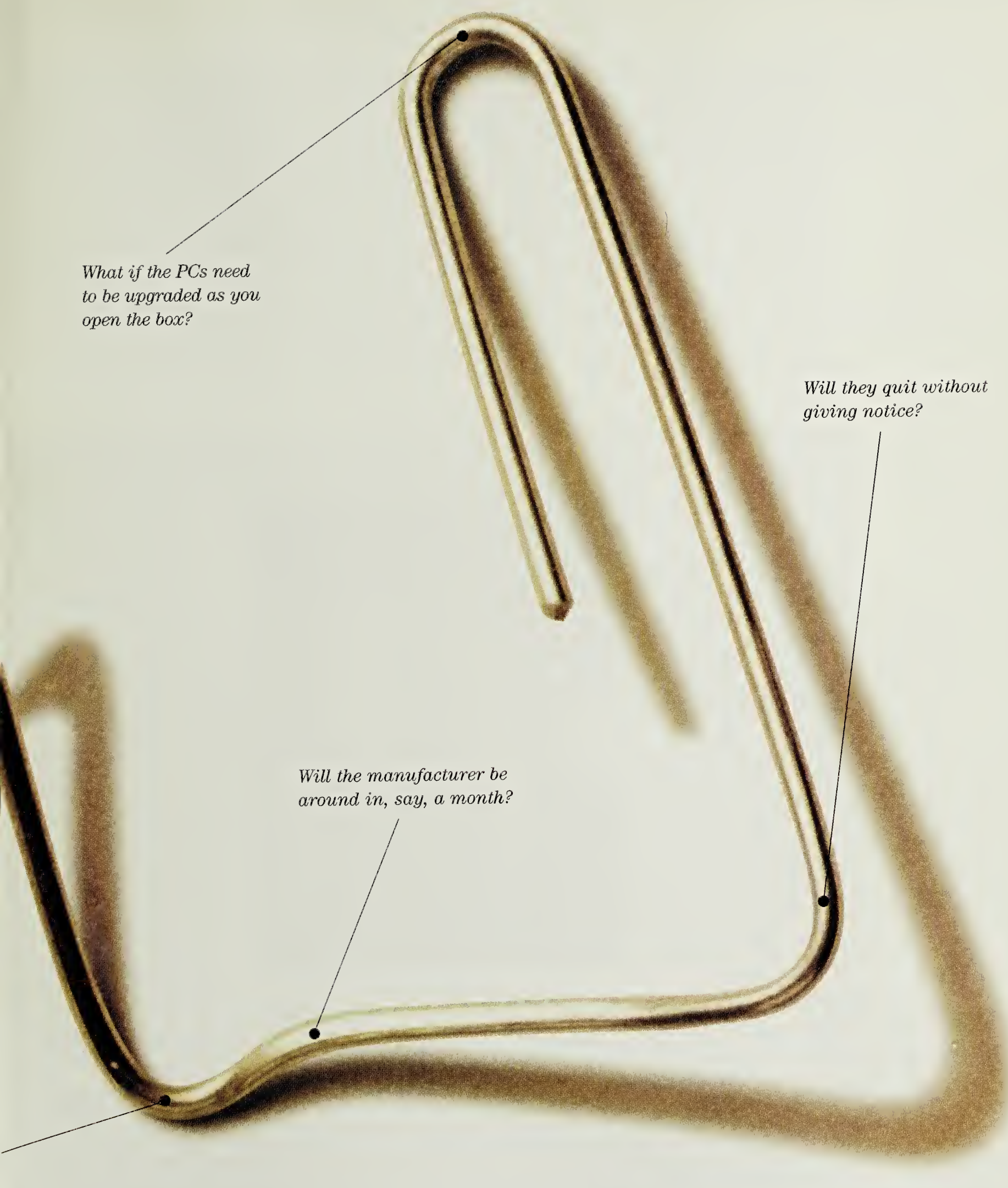
FROM \$1,110[†]

*Is there a service center
in your time zone?*



pentium[®]
PROCESSOR

*In Canada, call 1-800-387-3367. †Starting U.S. street price for HP Vectra VE3. Monitor not included. The Intel Inside logo and Pentium are registered trademarks of Intel Corporation. ©1996 Hewlett-Packard Company PPG431



*What if the PCs need
to be upgraded as you
open the box?*

*Will they quit without
giving notice?*

*Will the manufacturer be
around in, say, a month?*

A Path Through the Sands

Alignment, the model shows, involves 12 factors that are usually in flux, yet need to somehow work in harmony to align IT with business strategy (see story page 7). The factors are each so complex that it is obvious that no one blend of factors will always result in alignment. Instead, IS executives must find a way to keep these factors in sync; a way to aim at these eternally shifting targets. It's important, too, that their approach maximizes enablers (like support from non-IS executives) while minimizing inhibitors.

How can IS executives start aligning IS and the business? By putting this strategic alignment model to work, they can use it to help examine the current state of IS and the business and to consider where both are heading in the future. Once you locate the gaps between the current state of affairs and future needs, a simple scenario planning exercise can help prioritize IT activities.

No good plan can work without salesmanship or the right people. The place to begin is by selling the need for an alignment analysis to senior non-IS management. Then find a sponsor: he should be the highest ranking executive in the organization being assessed. (If it's the entire company, the sponsor should be the CEO.) Next, select a cross-functional team to perform the analysis. The team

should include six to 12 executives (including one or two from IS), recruited from various business units or departments. They should typically report to the sponsor or the executives that report to the sponsor; if the sponsor is the CEO, the team members should be senior vice presidents. Their knowledge of the business and credibility are critical for the success of the assessment.

Once the team is in place, the assessment can begin.

Start by analyzing each of

and future state from their respective points of view, be it marketing, finance, manufacturing, human resources or IS.

Keep the discussion free-flowing rather than restrictive; ask team members to suggest opportunities and problems, and place no time constraints when discussing the future. Brainstorming techniques and a professional facilitator who can ensure all team members present their views can be an enormous help. So can proper scheduling: Figure on a full day

to do the alignment assessment (not including an explanation of the 12 components and assessment process, which should take place earlier).

Most executives find it helpful to discuss the results with their staff and then return a week later for another full day of brainstorming with the assessment team.

For example, a healthcare products distributor may identify a "systemic competency" in its IT strategy: The company's information systems contain knowledge about how much each hospital it sells to spends on supplies. After talking about it with her staff, a mar-

keting executive on the team might identify a future competitive advantage: start selling to the hospitals' CFOs. If the distributor offers to turn supplies from a variable cost into a fixed cost by offering a single price for keeping the hospital supplied, the distrib-



Alignment is about what management does to achieve its IT goals.

the 12 components in the Strategic Alignment Model. First, focus on the current state for each of the 12 components. Then focus on the future state for each of the 12: where things are going to be. Ask each team member to discuss each current

utor can beat the competition. The data in the distributor's information systems can be turned to useful knowledge.

As a result of this analysis, the team will identify many such gaps between the present and the future state of each alignment factor. Now is the time to move on to the next stage of the analysis: prioritization. A simple 2 x 2 chart used in scenario planning — a technique for identifying the likelihood that events will

occur and the implications for an organization — can help to pri-

High Impact	Medium Priority	High Priority
	Low Priority	Medium Priority
Unlikely to occur		Very likely to occur

oritize the gaps the team has identified (see chart above).

Take each gap that has been identified and ask the team to

place it on this matrix. The gaps that demand high priority are those which are likely to occur and likely to have an impact on the business: the upper right quadrant. Those items become high-priority projects. Those which fall in the lower left quadrant — low likelihood, low impact — should be regarded as low priorities.

The final step is to review the list of projects with the sponsor and other senior executives and

The Alignment Archipelago

The 12 factors involved in aligning technology and business

I. Business Strategy

1. Business Scope

The markets, products, groups of customers and locations where an enterprise competes. It also includes the buyers, suppliers, competitors and potential competitors that affect the competitive environment.

2. Distinctive Competencies

The core competencies that give a company a potential competitive edge: e.g., research, manufacturing and product development capabilities; cost structures and pricing strategies; sales and distribution channels.

3. Business Governance

How companies set the relationship between management, stockholders and the board of directors. It also includes how companies are affected by government regulations and their relations with strategic partners.

II. Organizational Infrastructure and Processes

4. Administrative Structure

How a company organizes its businesses, processes and people and sets out responsibility and authority.

5. Processes

How the company's business activities — the work done by employees — operate or flow. Improvement and value-adding activities are major issues here.

6. Skills

The competencies and values employees possess to carry out corporate strategies. Human resource management and outsourcing fall under this category.

III. IT Strategy

7. Technology Scope

The technologies and applications that are important for an organization to be successful.

8. Systemic Competencies

The critical capabilities that a company's technologies provide to the business, such as access to information, communication, etc.

9. IT Governance

How authority and responsibility for IT is shared between users, IS management and service providers. This includes how projects are selected and prioritized.

IV. IT Infrastructure and Processes

10. IT Architecture

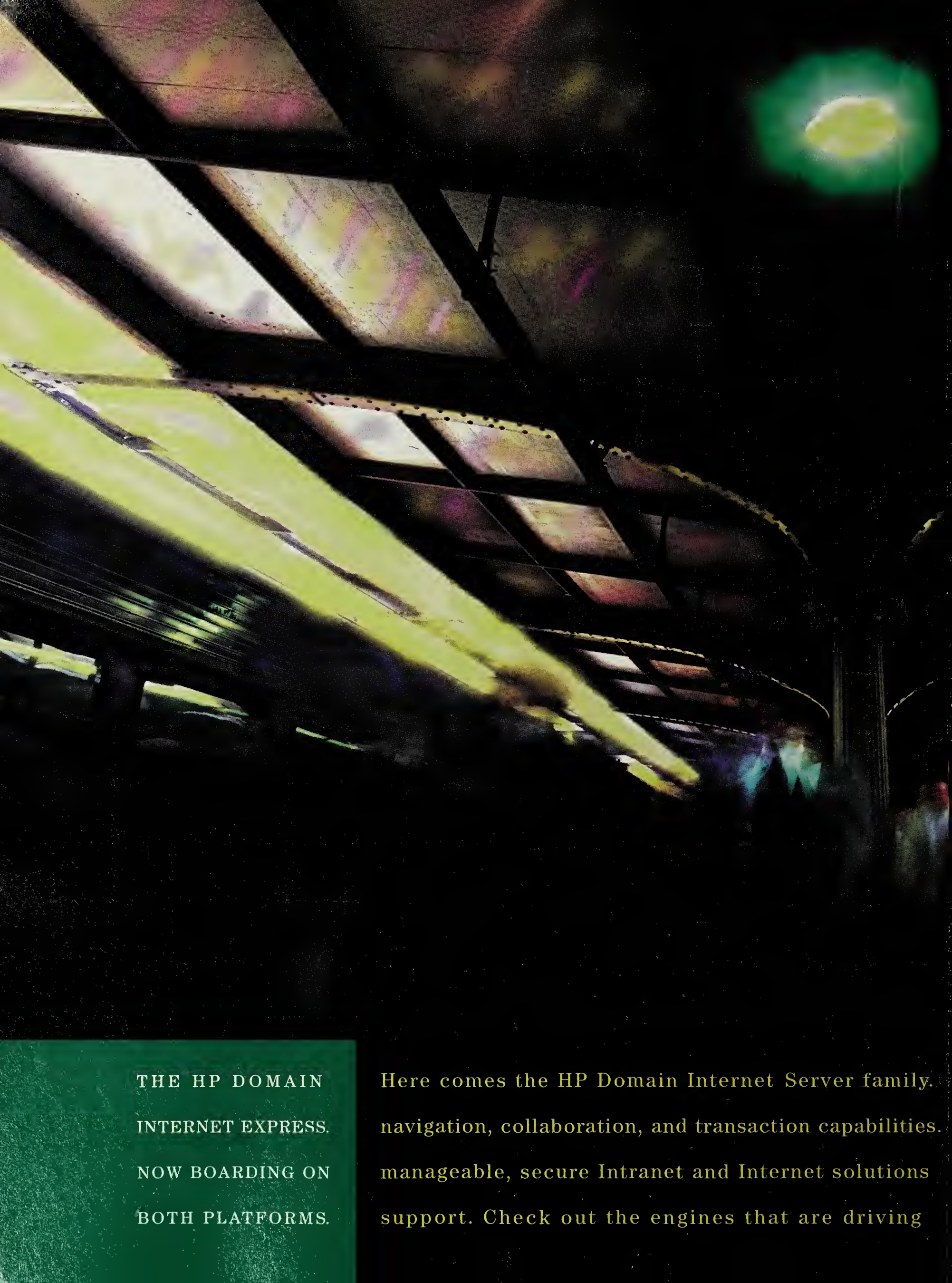
The technology choices, priorities and policies that enable applications, data, software, networks and hardware to be integrated into a cohesive platform.

11. Processes

The work and practices carried out to develop and maintain applications and manage the IT infrastructure.

12. Skills

The competencies and values of the individuals working to deliver the IT products and services. Includes training, motivation, hiring and firing of staff, as well as outsourcing.



THE HP DOMAIN
INTERNET EXPRESS.
NOW BOARDING ON
BOTH PLATFORMS.

Here comes the HP Domain Internet Server family, navigation, collaboration, and transaction capabilities, manageable, secure Intranet and Internet solutions support. Check out the engines that are driving



Easy to use, and Internet-ready...with unmatched publishing,
On both UNIX and NT platforms, it provides the most scalable,
going. All backed by our expert Net consulting, education, and
business into the future. Visit www.hp.com/go/domain





get their approval. A line executive on the team, rather than an IS executive, should do the presentation.

I have helped introduce this technique to many companies. In almost all cases, I have found that the team wins approval for the high-priority projects they

have identified. But this process has other positive side effects: The executive team walks away with a much better appreciation for IT. The presentation can be used to communicate with the rest of the organization. In fact, this method not only helps companies do a better job of aiming

at the 12 moving targets involved in alignment, but also maximizes the enablers of alignment that our research has identified, while minimizing the inhibitors. This method is a way to win executive support, gain IS involvement in a strategy setting and effectively prioritize projects.

Preventive Medicine

A review board, "SPOCs" and the Strategic Alignment Model keep business and IT in sync at a Bristol-Myers Squibb unit

Alignment Assurances

Alignment is not left to chance at the Bristol-Myers Squibb Pharmaceutical Group, a \$10 billion unit of the global healthcare product manufacturer, Bristol-Myers Squibb Co. "Strategic alignment heads the list of sources of competitiveness for the organization," says Vice President and Chief Information Officer Brian Crynes.

The Princeton, N.J.-based group, including the 700-strong information management organization led by Crynes, has instituted a new planning process, steering committees and a new position to ensure alignment.

The Pharmaceutical Group's IT Review Board, a steering committee of IS and non-IS executives, drives the planning process and ensures business leadership and accountability. The board uses the Strategic Alignment Model to identify IT opportunities and priorities. It also champions projects and decides which 20 IT projects to devote most of its time.

But the group doesn't only plan for alignment; it has created ways to track projects, share the lessons that the project teams

have learned and make sure alignment takes place in the trenches and the executive suites.

A year ago, the group created a position — the SPOC, or Single Point of Contact — to make sure alignment takes place in the field as well as the executive suite. SPOCs, business-IT liaisons who report to IT but work in the group's geographical and functional units, are usually IT professionals with 15 to 20 years of experience. SPOCs represent IT within their units' operating committees. They also help establish measures to evaluate the progress of IT projects.

Review Board

The board also conducts post-project reviews. The reviews examine whether the projects ran on time, on budget and if they provide the expected benefits. They also identify effective project management and technical practices. The board's project reviews are posted on Bristol-Myers Squibb's intranet.

These alignment activities have led to many important IT initiatives supporting the group's sales and marketing, disease management, supply chain and

finance organizations. The Pharmaceutical Group has already built a system that helps field salespeople and marketing pinpoint product markets. The system has been successfully deployed on time and on budget, Crynes says. Other projects include the group's enterprisewide SAP implementation and a global data warehouse project.

Initial Success

But while it's too early to judge the success of most of these projects, the group's alignment initiatives have already helped create a team of IS and non-IS executives and developed a way to prioritize projects. Senior business execs are acting as sponsors of IT projects. Alignment is now a process, not a wish, at the Pharmaceutical Group. Says Jack Pinter, director of global architectures, "We have taken the success we've had domestically with SPOCs and steering committees and are applying them globally."



There is no silver bullet appropriate for aligning all situations and goals. Businesses and technologies are changing too rapidly. There are too many factors involved in the alignment process. Relationships are as unique as the individuals who have them.

Still, by adopting an alignment assessment process such as this, IS executives can maximize the enablers of alignment while minimizing the inhibitors. They can build relationships, gain executive support, participate in strategy development

and do a better job of prioritizing their projects. CIOs can keep their organizations in sync with the business, no matter how much the sands shift.

Just remember to be patient. This approach is systematic, but it takes time to win and maintain support. And the planning process itself will need to evolve over time.

But if anyone doubts the importance of IT alignment, tell them this: If alignment is important enough to be discussed in the White House, it's important enough to be dis-

cussed by your company's president and vice presidents. ♦

Footnote

In addition to Luftman's new book (refer to the "About the Author" box below), Henderson and Venkatraman have described their model in articles appearing in the *IBM Systems Journal*, *Business Quarterly* and in *Information Technology and the Corporation of the 1990s*, edited by Thomas J. Allen and Michael Scott Morton (Oxford University Press, N.Y., 1993).

Further Readings

Besides the author's book, *Competing in the Information Age: Strategic Alignment in Practice*, which includes a paper by John C. Henderson and N. Venkatraman describing the Strategic Alignment Model, here are other works on the topic of alignment:

Strassmann, Paul. *The Business Value of Computers*. (Information Economics Press, New Canaan, Conn., 1990).

Parker, Marilyn & Benson,

Robert. *Information Economics*. (Prentice Hall, Englewood Cliffs, N. J., 1988).

Rockart, Jack. *The Rise of Managerial Computing*. (MIT Press, Cambridge, Mass., 1986).

For more information on scenario planning, see *The Art of the Long View* by Peter Schwartz (Doubleday, N.Y., 1991).

Computerworld has published many articles on the subject of

alignment. They include:

Alice Laplante's 1994 series on the value of IT: "No Doubt About IT" (Aug. 15), "IT's Got What it Takes," (Oct. 3), "IT All Adds Up" (Oct. 31).

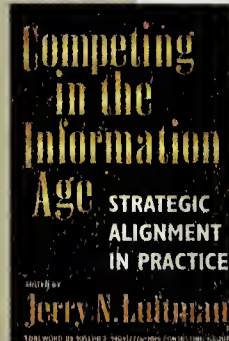
Paul Strassmann's Feb. 27, 1995 Leadership series article, "Governance: The New IS Agenda," which can be downloaded from <http://www.computerworld.com/Leadership>.

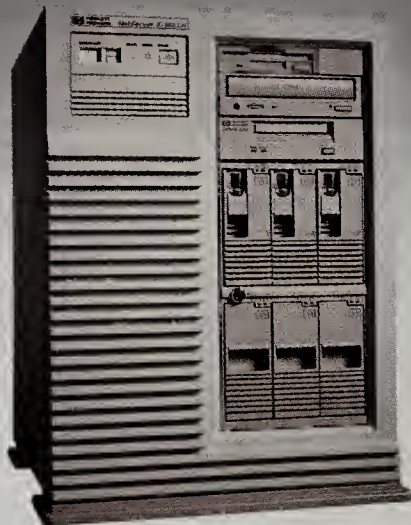
Allan E. Alter's "The Profit Center Paradox," April 24, 1995 and "A More Perfect Union," Nov. 28, 1994.



About the Author:

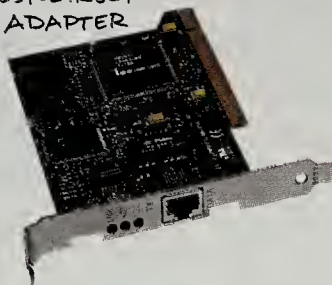
Jerry N. Luftman is both the editor and a contributor to *Competing in the Information Age*, a collection of articles and studies on IT alignment recently published by Oxford University Press (New York & Oxford, \$35, 414 pages). The former IBM IS executive is now a professor and the executive director of the Stevens Institute of Technology's Information Management Research Center. His career includes 22 years at IBM and positions in IS management, consulting and marketing. Luftman can be reached at jluftman@stevens-tech.edu.





HP NETSERVER

HP DESKDIRECT
LAN ADAPTER



HP ADVANCESTACK
SWITCH



HP SERVER PERFORMANCE PACK



BOBBY RAHAL -
SERVICE AND SUPPORT PROVIDED BY HP

How do you make a high-performance server even higher-performance? HP's Server Performance Pack. With switches and adapters in either 100 Base-T or 100 VG, it enhances any server, especially the HP NetServer. And for fine-tuning, there's our network management capability and three-year on-site warranty. What else would you expect? We live and breathe network engineering. For detailed specs, visit <http://www.hp.com/go/highperformance>, or call 1-800-533-1333, Ext. 1615.